

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended) A security reversible-key with at least three coding/tumbler coding pin rows (A1, A2, A3) located on flat sides of the key (S), with an assigned cylinder (Z) with tumbler pin rows of pairs of tumbler pins, said tumbler pin pairs consisting of tumbler pins and counter pins at the positions of the coding pin rows of a given bore pattern, wherein:

the key has a blocking groove (BN) in a coding pin row (A1, A2) that runs parallel to an axis (x) of the key from a tip of the key to at least a first coding position (P1) of the coding pin row on the key,

the blocking groove has a coded blocking depth (B1, B2, B3) and, in the assigned cylinder at least at a rearmost coding position (P1'), a pair of blocking tumbler pins corresponding to the blocking groove (BN) with a blocking tumbler pin (BZ) and an extended blocking counter pin (BG) are received,

wherein a total length (lb) of the blocking tumbler pin (BZ) and the blocking counter pin (BG) is almost equal to a distance (db) from the blocking groove (BN) to a cylinder housing (10).

so that the blocking counter pin impinges on the cylinder housing (10) if the blocking groove is not deep enough and complete insertion of a key with an insufficiently deep blocking groove is blocked by the pair of blocking tumbler pins and whereby the blocking tumbler pin (BZ) together with the blocking counter pin (BG), following insertion of the key at the first coding position (P1) on the key, is also utilized as a coding tumbler pin with coding steps (C1, C2, C3, C4) for turning of the cylinder.

Claim 2 (Currently Amended) The key in accordance with claim 1, wherein at least

four ~~coding/tumbler~~coding pin rows (A1 - A4) are provided.

Claim 3 (Previously Presented) The key in accordance with claim 1, wherein at least two different codings (Cod1, Cod2) are provided.

Claim 4 (Previously Presented) The key in accordance with claim 1, wherein coding positions (Pi) from two different bore patterns (R, L) are provided.

Claim 5 (Previously Presented) The key in accordance with claim 1, wherein the blocking groove runs to at least the first two coding positions (P1, P2) at the very front of a coding pin row (A2) and by blocking tumbler pins (BZ1, BZ2) and blocking counter pins (BG1, BG2) corresponding to the coding positions, with coded step depths of these at least two positions at the very front.

Claim 6 (Previously Presented) The key in accordance with claim 5, wherein the blocking groove has at least two differently shaped sectors (BN1, BN2).

Claim 7 (Previously Presented) The key in accordance with claim 1, wherein the blocking groove extends over more than one coding position and whereby the depth (tb) of the blocking groove is constant or decreases from one coding position (P1) to the next coding position (P2).

Claim 8 (Previously Presented) The key in accordance with claim 1, wherein the blocking groove extends over more than one coding position and whereby the width (bb) of the blocking groove remains constant or decreases from one position (P1) to the next position (P2).

Claim 9 (Previously Presented) The key in accordance with claim 1, wherein at more than one coding pin row (A1, A2), respectively, one blocking groove each with assigned pairs of blocking tumbler pins is provided.

Claim 10 (Previously Presented) The key in accordance with claim 1, wherein, as

an additional security element, a rising control face (KF) is disposed only at the tip of the key, said control face (KF) pushes an assigned control pin (KS) out of the way, whereby the control pin (KS) prevents insertion of a key without a control face (KF).

Claim 11 (Previously Presented) The key in accordance with claim 10, wherein the control pin (KS) is a flat pin (23), which also carries out a flank control at a narrow coding milling (Cod2).

Claim 12 (Previously Presented) The key in accordance with claim 1, wherein, in a coding pin row (A2), the following security elements are located: blocking code (BC), second coding (Cod2), insertion preventing system by means of control face (KF) and control pin (KS) as well as flank control by means of a flat pin (23).

Claim 13 (Currently Amended) A locking system with security reversible keys with at least three ~~coding/tumbler~~coding pin rows (A1, A2, A3), which are also located on flat sides of the keys (S), with assigned cylinders (Z) with tumbler pin rows of pairs of tumbler pins, said tumbler pin pairs consisting of tumbler pins and counter pins at the positions of the coding pin rows of a given bore pattern and with at least two additional security elements, wherein at least two areas on the keys are defined such that, in a first area (G1), at least two additional security elements with a higher degree of manufacturing difficulty are provided and, in the second area (G2), a more simple basic coding (Cod1) is provided, and wherein, with the first area (G1) an unequivocal segmentation into independent market areas (M1, M2, ...) is defined whereby the first area (G1) has, as an additional security element, a blocking code (BC),

the keys have a blocking groove (BN) in a coding pin row that runs parallel to an axis (x) of the key from a tip of the key to at least a first coding position (P1) of the coding pin row on the key,

the blocking groove has a coded blocking depth (B1, B2, B3), and,

in the assigned cylinder at least at the rearmost coding position (P1'), a pair of blocking tumbler pins with a blocking tumbler pin (BZ) and an extended blocking counter pin (BG) corresponding to the blocking groove (BN) are provided,

wherein a total length (lb) of the blocking tumbler pin (BZ) and the blocking counter pin (BG) is almost equal to a distance (db) from the blocking groove (BN) to a cylinder housing (10),

such that the blocking counter pin (BG) impinges on the cylinder housing (10) if the blocking groove is not deep enough to thereby block complete insertion of a key with an insufficiently deep blocking groove by the pair of blocking tumbler pins, and whereby the blocking tumbler pin (BZ) with the blocking counter pin (BG), after insertion of the key at the first coding position (P1) on the key, is also utilized as a coding tumbler pin with coding steps (C1, C2, C3, C4) for turning of the cylinder.

Claim 14 (Previously Presented) The locking system in accordance with claim 13, wherein, as security elements in the first area (G1), a second coding (Cod2), an insertion preventing means comprising a control face (KF) at the tip of the key and an assigned control pin (KS) in the cylinder, and a flank control comprising a flat tumbler pin (23) and a blocking code (BC) are provided.

Claim 15 (Previously Presented) The locking system in accordance with claim 13, wherein, the keys include areas having different bore patterns (R, L).

Claim 16 (Previously Presented) The locking system in accordance with claim 13, wherein at least three security elements are provided in the first area (G1).

Claim 17 (Previously Presented) The locking system in accordance with claim 13, wherein, as security elements, a second coding (Cod2) with a narrow milling is provided.

Claim 18 (Previously Presented) The locking system in accordance with claim 13, wherein all security elements of the first area (G1) are affixed in one coding pin row (A2).

Claim 19 (Previously Presented) A method for manufacturing keys and cylinders of a locking system with at least two areas (G1, G2) on the keys (S) in accordance with

claim 13, wherein first the first area (G1) on the keys is manufactured in a central place of manufacture (H1), and that the coding (Cod1) of the keys of the second area G2 and the equipping of the cylinders with corresponding pins is subsequently manufactured at a remote location by local representative (H2).

Claim 20 (Previously Presented) The method in accordance with claim 19, wherein manufacturing takes place in at least two steps at different locations, whereby first variables with a higher degree of difficulty (HS) of the first area (G1) are manufactured at a central location and subsequently variables with a lower degree of difficulty of the second area (G2) are manufactured in a second decentralized location.

Claim 21 (Previously Presented) The method in accordance with claim 19, wherein manufacturing of the keys takes place in at least three steps, whereby first the first area (G1) with variables of the highest degree of difficulty is manufactured centrally (H1), thereupon a further area (G1/2) with variables with a lower degree of difficulty is manufactured regionally (H1/2) and finally the coding with the lowest degree of difficulty of the second area (G2) is manufactured locally at the place of application (H2).

Claim 22 (Previously Presented) The method in accordance with claim 19, wherein the manufacturing of the first area (G1) is also able to take place decentralized, whereby manufacturing programs and authorization for a desired operation are controlled and checked from a central location.